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Case 5014A

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REMARKS

Summary of Claim Amendments

Claim 4 has been amended to correct an improper Markush group.

Rejection under 35 USC 103

Claims 2 and 4-16 are rejected under 35 USC 103(a) as being unpatentable over US Patent 4,109,038 to HAYASHI et al. in view of US Patent Application Publication No. 2003/0190853 to LOVINGOOD.

The argument presented in the Office Action is essentially as follows:

HAYASHI et al. fail to teach calendering. LOVINGOOD is drawn to stretchy woven fabrics using natural yarns. LOVINGOOD teaches that the woven fabric can be napped or calendered on the surface. It would have been obvious to use calendering on the surface of the fabric of HAYASHI, as taught by LOVINGOOD, motivated by a desire to create a smooth surface of the woven fabric.

It would have been obvious to have provided some of the natural fibers of LOVINGOOD to the weft of HAYASHI as a means to save money on the expensive composite yarns provided by HAYASHI, with the reasoned expectation that a fabric with a good surface texture as taught by LOVINGOOD would be produced.

As best understood, HAYASHI teaches a woven fabric, where the weft yarns are either a single twist filament yarn or a loopy textured filament yarn (Col. 3, lines 15-19). HAYASHI specifically contemplates the use of multi-component yarns (e.g., hollow composite fibers or island-in-the-sea yarns) for the weft yarns. These yarns are synthetic. HAYASHI provides that the warp yarns are one of "a filament yarn; a spun yarn; a textured filament yarn...; a loopy textured filament yarn...; a mixed filament yarn;

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and a mixed spun yarn" (Col. 5, lines 53-59). The warp yarns may be synthetic or natural (Col. 5, lines 63-68).

LOVINGOOD is directed to the production of a chambray fabric, where a non-blended warp of one fiber type and a non-blended filling of a second fiber type are non-union dyed. In one embodiment, synthetic yarns are used in the warp direction, and cellulosic yarns (e.g., cotton) are used in the filling direction.

The present Claim 2, from which the remaining claims depend either directly or indirectly, recites that the warp and filling yarns of the subject fabric are made of natural fibers and that the fabric has a coagulated polymer latex coating partially incorporated therein.

MPEP 2142 sets forth the requirements for establishing a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants submit that no *prima facie* case of obviousness exists with respect to each of the three basic criteria laid out above.

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1. *Motivation to Combine*

To establish a *prima facie* case of obviousness, there must be some motivation to combine the references. In this instance, Applicants believe that no such motivation exists.

The Office initially suggested that the motivation to combine the references was a desire to create a smooth surface (e.g., by calendering, as taught by LOVINGOOD) in the woven fabric of HAYASHI. However, Applicants find this suggestion untenable because the HAYASHI reference teaches that the surface of the fabric is "raised by using a conventional raising machine, such as emery raising machine, teazel raising machine, or wire raising machine" (Col. 6, lines 20-23). The objective of the HAYASHI processing is to "raise fibers from the surface portion of the weft yarns so that they stand essentially upright to form the raised portion" (Col. 6, lines 23-30). Thus, it appears to Applicants that HAYASHI actually teaches away from calendering, as claimed in Claims 8 and 9.

In the present rejection, the Office has also suggested that the motivation to combine the references is a desire to reduce the costs associated with manufacturing the HAYASHI fabric by using natural fibers in the warp, as taught by LOVINGOOD. Applicants also find this purported motivation suspect, because, in fact, HAYASHI provides that the warp yarns may be made of any of a variety of less expensive yarns (Col. 5, lines 53-58).

As mentioned previously, LOVINGOOD is directed to creating a fabric with a chambray appearance, while HAYASHI is directed to the production of artificial suede. The only similarity between such references is the use of textile fabrics. One seeking to improve the HAYASHI coated fabric would not be motivated to consider the teachings of LOVINGOOD, when LOVINGOOD provides no teachings of coatings whatsoever.

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2. *Likelihood of Success*

Another requirement for establishing a *prima facie* case of obviousness is that there is a reasonable likelihood that the combination of the references will be successful. In the present case, Applicants submit that combining the teachings of LOVINGOOD (e.g., of calendaring the fabric) would render the HAYASHI fabric unsuitable for its intended purpose. Specifically, calendaring the HAYASHI fabric would flatten it, destroying the fibers raised by the raising process, which are necessary to produce the desired suede-like feel.

3. *Teaching of All Limitations*

Regardless of whether the references are properly combined or whether there is a reasonable expectation of success in combining the references, the combination of HAYASHI and LOVINGOOD fails to provide a teaching of all of the limitations of Applicants' claims.

Claim 2, from which the remaining claims depend directly or indirectly, is directed to a composite made of a woven fabric having natural warp and filling yarns, which has been coated on at least one side with a coagulated polymer latex, such that a seamless transition between the coating and the fabric is created.

Neither the HAYASHI reference nor the LOVINGOOD reference provides any teaching of a woven fabric having natural warp and fill yarns, where the woven fabric has a coagulated elastomeric coating on at least one side. In both references, at least one set of yarns must be synthetic. In the HAYASHI reference, the weft yarns are synthetic loopy textured filament yarns or single twist filament yarns, so that the raising process splits the filaments and creates a suede-like feel. In the LOVINGOOD reference, one

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set of yarns is synthetic and the opposite set is natural, so that differential dyeing may occur to produce a chambray appearance.

Further, neither of the references (either alone or in combination) provides a teaching of such a coagulated elastomeric coating. HAYASHI describes an "elastic polymer" coating and provides a list of possible polymer materials (Col. 6, lines 52-63). The elastic polymer is put into the form of a solution or emulsion and applied to the fabric (e.g., by emulsion as described in Example 1 and 4). HAYASHI does not describe a polymer coating that is "coagulated," as described in the present application. LOVINGOOD provides no teaching whatsoever of a coating composition for textile substrates.

As described in the present application, the elastomer composition includes a waterborne polymer latex, an acid-generating chemical, a cloud-point surfactant, and a foam-stabilizing surfactant (page 5, lines 10-14). The elastomer composition is applied as a foam, after which the coated fabric is heated, thereby generating an acid, gelling the cloud-point surfactant, and coagulating the coating composition over the fabric. This process results in a softer and more pliable substrate than that produced with immersion coating (as described in the present Examples 5 and 6) and that produced with polymers alone. Thus, HAYASHI's "elastic polymer" is different from Applicant's "elastomer composition."

For the foregoing reasons, Applicants believe that no *prima facie* case of obviousness exists. Accordingly, Applicants respectfully request the withdrawal of the rejection of Claims 2 and 4-16.

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In view of all of the previous remarks, Applicants respectfully submit that this application is now in condition for allowance. Entry of this Amendment and issuance of a formal Notice of Allowance is courteously solicited.

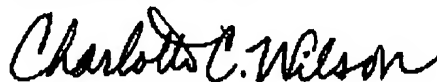
Should any issues remain after consideration of these Remarks, the Examiner is invited and encouraged to telephone the undersigned in the hope that any such issue may be resolved promptly and satisfactorily.

It is believed that this response is being timely filed and that no fees are owed with this submission. In the event that there are fees associated with the submission of these papers (including extension of time fees), authorization is hereby provided to withdraw such fees from Deposit Account No. 04-0500.

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Respectfully submitted,



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